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I. STATUS OF CLAIMS

Claims 180 were pending at the time the Office Action was mailed on June 4, 2008.

The Specification is objected to on grounds that the Abstract fails to comply with MPEP §608.01(b).

Claims 108-128 and 154-180 stand rejected under 35 USC §101 as being directed to non-statutory subject matter.

Claims 154-178 stand rejected under 35 USC §112, ¶1 due to undue breadth.

Claims 19, 36, 37, 45-47, 67, 84-85, and 93-95 stand rejected under 35 USC §112, ¶2 as being indefinite.

Claims 179 and 180 stand rejected under 35 USC §102(b) as being anticipated by Mulgund (US 2002/0161751).

Claims 1-5, 8, 9, 11-12, 14, 16, 20-21, 23, 25, 36, 38-39, 42-46, 48, 50-53, 56-57, 59-60, 62, 64, 68-69, 71, 73, 84, 86-87, 90-94, 96, 98-101, 104, 105, 108-112, 114-117, 119-122, 125-126, 129-131, 133, 135, 137-138, 140, 142, 144-147, 150-151, 154-156, 158, 160, 162-163, 165, 167, 169-172, 175, and 176 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett (US 5615367).

Claims 6-7 and 54-55 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Chiloyan (US 7165109).

Claims 10, 13, 15, 17-18, 22, 24, 40-41, 49, 58, 61, 63, 65-66, 70, 72, 88-89, 97, 113, 118, 132, 134, 136, 139, 141, 143, 157, 159, 161, 164, 166, and 168 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Kung (US 2005/0021724).

Claims 19, 25, 31-35, 37, 67, 73, 79-83, and 85 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Madden "The Design of an Acquisitional Query Processor for Sensor Networks" (Madden I).

Claims 26 and 74 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Madden I, and further in view of Chiloyan.

Claims 27-30 and 75-78 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Madden I, and further in view of Godlewski (US 6421354).

Claims 47 and 95 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Regli (US 2005/0141706).

Claims 102-103, 106, 123-124, 127, 148-149, 152, 173-174, and 177 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Nelson (US 2004/0122849).

Claims 107, 128, 153, and 178 stand rejected under 35 USC §103(a) as being unpatentable over Mulgund in view of Bennett, and further in view of Madden "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" (Madden II).

II. ISSUES TO BE REVIEWED

The issues in this response relate to whether the art of record establishes a *prima facie* case of anticipation of Applicant's Claims 179-180, and whether the art of record establishes a *prima facie* case of unpatentability of Applicant's Claims 1-178. For reasons set forth elsewhere herein, Applicant respectfully asserts that the art of record does not establish a *prima facie* case of anticipation or unpatentability of any pending claim. Accordingly, Applicant respectfully requests that Examiner hold all pending Claims 1-180 allowable for at least the reasons described herein, and issue a Notice of Allowance on same.

III. OBJECTION TO SPECIFICATION

The Examiner objected to the Specification on grounds that the Abstract fails to comply with MPEP §608.01(b). Applicant has amended the Abstract to more fully inform regarding the nature and gist of the technical disclosure. Accordingly,

Applicant respectfully requests reconsideration and withdrawal of the objection to the Specification.

IV. REJECTIONS OF CLAIMS 108-128 AND 154-180 UNDER §101 AS BEING DIRECTED TO NON-STATUTORY SUBJECT MATTER

The Examiner rejected claims 108-128 and 154-180 under 35 USC §101 as being directed to non-statutory subject matter. More specifically, the Examiner rejected to these claims as being directed to computer software per se.

Applicant has amended claim 108 to recite:

> 108. A system comprising:
> means for creating one or more first-administered content indexes for a first set of motes;
> means for aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes;
> means for creating one or more second-administered content indexes for a second set of motes;
> means for obtaining at least a part of the second-administered content indexes of the second set of motes; and
> means for creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes, *wherein at least one of the means for creating or the means for obtaining includes at least one of electrical circuitry for creating or electrical circuitry for obtaining.* (emphasis added).

Since claim 108 has been amended to recite "*wherein at least one of the means for creating or the means for obtaining includes at least one of electrical circuitry for creating or electrical circuitry for obtaining*" claim 108 properly recites statutory subject matter.

Similarly, claim 154 has been amended to recite:

> 154. A system comprising:
> means for aggregating a plurality of a first-administered content index from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes;

means for receiving at least a part of a second-administered content index from a second set of motes; and

means for creating a federated index from the aggregated content index from the aggregating mote and at least a part of the second-administered content index, *wherein at least one of the means for obtaining or the means for creating includes at least one of electrical circuitry for obtaining or electrical circuitry for creating.* (emphasis added).

Since claim 154 has been amended to recite "*wherein at least one of the means for obtaining or the means for creating includes at least one of electrical circuitry for obtaining or electrical circuitry for creating*" claim 154 properly recites statutory subject matter.

Similarly, claim 179 has been amended to recite:

179. A system comprising:

at least one computational system *having electrical circuitry* and being operably coupled with at least one of a first-administered set of motes or a second-administered set of motes;

at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to

receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and

aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and

at least one federated index creation agent resident in the computational system, said at least one federated index creation agent configured to receive the at least one aggregated index, and to create a federated index that includes the at least one aggregated index. (emphasis added).

Since claim 179 has been amended to recite "at least one computational system *having electrical circuitry*", claim 179 properly recites statutory subject matter.

Similarly, claim 180 has been amended to recite:

> 180. A system comprising:
> at least one computational system *having electrical circuitry* and being operably coupled with at least one of a first-administered set of motes or a second-administered set of motes;
> at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to
> receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and
> aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and
> at least one federated index resident in the computational system, said at least one at least one federated index configured to contain the at least one aggregated index. (emphasis added).

Since claim 180 has been amended to recite "at least one computational system *having electrical circuitry*", claim 180 properly recites statutory subject matter.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 108-128 and 154-180 under 35 USC §101.

V. REJECTIONS OF CLAIMS 154-178 UNDER §112, ¶1 DUE TO UNDUE BREADTH

The Examiner rejected claims 154-178 stand rejected under 35 USC §112, ¶1 due to undue breadth. More specifically, the Examiner rejected these claims as being directed to a single "means for" element, which the Examiner interprets as being "a federated index creation agent (914)." (Office Action mailed 4 June, 2008, p. 21).

Applicant has amended claim 154 to recite:

154. A system comprising:

means for aggregating a plurality of a first-administered content index from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes;

means for receiving at least a part of a second-administered content index from a second set of motes; and

means for creating a federated index from the aggregated content index from the aggregating mote and at least a part of the second-administered content index, wherein at least one of the means for obtaining or the means for creating includes at least one of electrical circuitry for obtaining or electrical circuitry for creating. (emphasis added).

As described in Applicant's disclosure, in some implementations, "means for aggregating" may comprise at least one of: multi-mote index creation agent (Figs. 3-9), gateway mote (Figs. 3-9), or other suitable components. Similarly, "*means for receiving*" may comprise at least one of: antenna 102 (pages 7-9 and 14-15; Figures 1-10), gateway 706 (pages 13-14 and 21-22; Figures 7, 9, and 10), reporting entity 302, 602, 904 (pages 13-37; Figures 3, 6, 9, and 10), or other suitable components.

For example, Applicant's specification describes another implementation at page 14 as follows:

> "Mote 300 is illustrated as similar to mote 200 (Figure 2), but with the addition of reporting entity 302. In some implementations, reporting entity 302 is a computer program -- resident in mote 300 -- that executes on a processor of mote 300 and that transmits all or a part of mote-addressed sensing index 204, mote-addressed control index 206, and/or mote-addressed routing/spatial index 252 to another entity (e.g., through antenna 102 to a multi-mote index creation agent such as shown/described in relation to Figure 5 or through a mote-network to a designated gateway such as shown/described in relation to Figures 7, 9, and/or 10)."

Similarly, Applicant's specification describes a particular implementation at page 35 as follows:

> "For example, federated index creation agent 914 receiving at least a part of a mote-addressed sensing index or a mote-addressed control index from one or more associated reporting entities at the motes of

second-administered set 802 of motes (e.g., such as shown and described in relation the mote-addressed content indexes and associated reporting entities of second-administered set 802 of motes of Figures 7, 8, 9, 10 and/or 11)."

For the foregoing reasons, Applicant respectfully submits that claim 154 is not directed to a single "means for" element, and respectfully requests reconsideration and withdrawal of the rejections of claims 154-178 under 35 USC §112, ¶1 due to undue breadth.

VI. REJECTIONS OF CLAIMS UNDER §112, ¶2 AS BEING INDEFINITE

The Examiner rejected claims 19, 36, 37, 45-47, 67, 84-85, and 93-95 under 35 USC §112, ¶2 as being indefinite. In response, Applicant has taken the following action:

Applicant has amended claims 19 and 67 to correct inconsistencies in terminology;

Applicant has also amended claims 36 and 37 to depend from claim 1;

Applicant has also amended claims 45-47 and 93-95 to recite "one or more predetermined protocols."

For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 19, 36, 37, 45-47, 67, 84-85, and 93-95 under 35 USC §112, ¶2.

VII. ARGUMENT: ART OF RECORD DOES NOT ESTABLISH *PRIMA FACIE* CASE OF UNPATENTABILITY IN VIEW OF CITED ART OF RECORD

Applicant respectfully asserts herein that, under the MPEP and legal standards for patentability as set forth below, the art of record does not establish a *prima facie* case of the unpatentability of Applicant's claims at issue. Specifically, Applicant respectfully shows below that the art of record does not recite the text of Applicant's claims at issue, and hence fails to establish a *prima facie* case of unpatentability. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejections and hold all claims to be allowable over the art of record.

A. MPEP Standards for Patentability[1]

The MPEP states as follows: "the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. . . If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)); *In Re Glaug*, 283 F.3d 1335, 62 USPQ2d 1151 (Fed. Cir. 2002) ("During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the applicant is entitled to the patent."). Accordingly, unless and until an examiner presents evidence establishing *prima facie* unpatentability, an applicant is entitled to a patent on all claims presented for examination.

1. MPEP Standards for Determining Anticipation

An examiner bears the initial burden of factually supporting any *prima facie* conclusion of anticipation. *Ex Parte Skinner*, 2 U.S.P.Q.2d 1788, 1788-89 (B.P.A.I. 1986); *In Re King*, 801 F.2d 1324, 231 U.S.P.Q. (BNA) 136 (Fed. Cir. 1986); *MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992) ("[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability....")). Failure of an examiner to meet this burden entitles an applicant to a patent. *Id.* ("[i]f examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent").

The MPEP indicates that in order for an examiner to establish a *prima facie* case of anticipation of an applicant's claim, the examiner must first interpret the

[1] Applicant is aware that Examiner is familiar with the MPEP standards. Applicant is merely setting forth the MPEP standards to serve as a framework for Applicant's arguments following and to ensure a complete written record is established. Should Examiner disagree with Applicant's characterization of the MPEP standards, Applicant respectfully requests correction.

claim,[2] and thereafter show that the cited prior art discloses the same elements, in the same arrangement, as the elements of the claim which the examiner asserts is anticipated. More specifically, the MPEP states that "[a] claim is anticipated *only if each and every element as set forth in the claim is found*, either expressly or inherently described, in a single prior art reference. . . . The identical invention must be shown in as complete detail as is contained in the . . . claim. . . . The elements must be arranged as required by the claim . . . .". *MPEP* § 2131 (emphasis added). Consequently, under the guidelines of the MPEP set forth above, if there is *any* substantial difference between the prior art cited by an examiner and an applicant's claim which the examiner asserts is rendered anticipated by the prior art, the prior art does NOT establish a *prima facie* case of anticipation and, barring other rejections, the applicant is entitled to a patent on such claim.

2. MPEP Standards for Determining Obviousness

"[T]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness."[3] *MPEP* § 2142. The MPEP indicates that in order for an examiner to establish a *prima facie* case that an invention, as defined by a claim at issue, is obvious, the examiner must (1) interpret the claim at issue; (2) define one or more prior art reference components relevant to the claim at issue; (3) ascertain the differences between the one or more prior art reference components and the elements of the claim at issue; and (4) adduce objective evidence which establishes, under a preponderance of the evidence standard, a teaching to modify the teachings of the prior art reference components such that the prior art reference components can be used to construct a device substantially equivalent to the claim at

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[2] With respect to interpreting a claim at issue, the MPEP directs that, during examination -- as opposed to subsequent to issue -- such claim be interpreted as broadly as the claim terms would reasonably allow, in light of the specification, when read by one skilled in the art with which the claimed invention is most closely connected. *MPEP* § 2111.

[3] An invention, as embodied in the claims, is rendered obvious if an examiner concludes that although the claimed invention is not identically disclosed or described in a reference, the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *MPEP* § 2141 (citing 35 U.S.C. § 103).

issue. This last step generally encompasses two sub-steps: (1) adducement of objective evidence teaching how to modify the prior art components to achieve the individual elements of the claim at issue; and (2) adducement of objective evidence teaching how to combine the modified individual components such that the claim at issue, as a whole, is achieved. *MPEP* § 2141; *MPEP* § 2143. Each of these forgoing elements is further defined within the MPEP. *Id.*

This requirement has been explained recently by the Supreme Court in *KSR v. Teleflex, 550 U.S. _____; 127 S. Ct. 1727 (2007)* which noted that such a rejection requires "some articulated reasoning ... to support the legal conclusion of obviousness." As stated by the Court, obviousness can be established where "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, ***this analysis should be made explicit.***" (*emphasis added*) See In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) ('[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.')." *KSR v. Teleflex, 550 U.S. _____; 127 S. Ct. 1727 at 1741.*

As further described by the Court ***"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.*** Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR v. Teleflex, 550 U.S. _____; 127 S. Ct. 1727 at 1741.*

a) Interpreting a Claim at Issue

With respect to interpreting a claim at issue, the MPEP directs that, during examination -- as opposed to subsequent to issue -- such claim be interpreted as broadly as the claim terms would reasonably allow when read by one skilled in the art with which the claimed invention is most closely connected. In practice, this is achieved by giving each of the terms in the claim the "plain meaning" of the terms as such would be understood by those having ordinary skill in the art, and if portions of the claim have no "plain meaning" within the art, or are ambiguous as used in a claim, then the examiner is to consult the specification for clarification. *MPEP* § 2111.

b) Definition of One or More Prior Art Reference Components Relevant to the Claim at Issue

Once the claim at issue has been properly interpreted, the next step is the definition of one or more prior art reference components (*e.g.*, electrical, mechanical, or other components set forth in a prior art reference) relevant to the properly interpreted claim at issue. With respect to the definition of one or more prior art reference components relevant to the claim at issue, the MPEP defines three proper sources of such prior art reference components, with the further requirement that each such source must have been extant at the time of invention to be considered relevant. These three sources are as follows: patents as defined by 35 U.S.C. § 102, printed publications as defined by 35 U.S.C. § 102, and information (*e.g.*, scientific principles) deemed to be "well known in the art"[4] as defined under 35 U.S.C. § 102. *MPEP* § 2141; *MPEP* § 2144.

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[4] The fact that information deemed to be "well known in the art" can serve as a proper source of prior art reference components seems to open the door to subjectivity, but such is not the case. As a remedy to this potential problem, *MPEP* § 2144.03 states that if an examiner asserts that his position is derived from and/or is supported by a teaching or suggestion that is alleged to have been "well known in the art," and that if an applicant traverses such an assertion (that something was "well known within the art"), the examiner must cite a reference in support of his or her position. The same MPEP section also states that when a rejection is based on facts within the personal knowledge of an examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner. Such an affidavit is subject to contradiction or explanation by the affidavits of the applicant and other persons. *Id.* Thus, all sources of prior art reference components must be objectively verifiable.

c) Ascertainment of Differences between Prior Art Reference Components and Claim at Issue; Teaching to Modify and/or Combine Prior Art Reference Components to Remedy Those Differences in Order to Achieve Recitations of Claim at Issue

With one or more prior art components so defined and drawn from the proper prior art sources, the differences between the one or more prior art reference components and the elements of the claim at issue are to be ascertained. Thereafter, in order to establish a case of *prima facie* obviousness, an examiner must set forth a rationale, supported by objective evidence[5] sufficient to demonstrate under a preponderance of the evidence standard, that in the prior art extant at the time of invention there was a teaching to modify and/or combine the one or more prior art reference components to construct a device practicably equivalent to the claim at issue.

The preferable evidence relied upon is an express teaching to modify/combine within the properly defined objectively verifiable sources of prior art. In the absence of such express teaching, an examiner may attempt to establish a rationale to support a finding of such teaching reasoned from, or based upon, express teachings taken from the defined proper sources of such evidence (*i.e.*, properly defined objectively verifiable sources of prior art). *MPEP* § 2144; *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

The MPEP recognizes the pitfalls associated with the tendency to subconsciously use impermissible "hindsight" when an examiner attempts to establish such a rationale. The MPEP has set forth at least two rules to ensure against the likelihood of such impermissible use of hindsight. The first rule is that:

> under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information,[6] the examiner must then make a determination whether the

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[5] The proper sources of the objective evidence supporting the rationale are the defined proper sources of prior art reference components, discussed above, with the addition of factually similar legal precedent. *MPEP* § 2144.

[6] "Factual information" is information actually existing or occurring, as distinguished from mere supposition or opinion. *Black's Law Dictionary* 532 (5th ed. 1979).

> claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of an Applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search, and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon an Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

MPEP § 2142 (emphasis added). Thus, if the only objective evidence of such teaching to modify and/or combine prior art reference components is an applicant's disclosure, no evidence of such teaching exists.[7]

The second rule is that if an examiner attempts to rely on some advantage or expected beneficial result that would have been produced by a modification and/or combination of the prior art reference components as evidence to support a rationale to establish such teachings to modify and/or combine prior art reference components, the MPEP requires that such advantage or expected beneficial result be objectively verifiable teachings present in the acceptable sources of prior art (or drawn from a convincing line of reasoning based on objectively verifiable established scientific principles or teachings). *MPEP* § 2144. Thus, as a guide to avoid the use of impermissible hindsight, these rules from the MPEP make clear that absent some objective evidence, sufficient to persuade under a preponderance of the evidence standard, no teaching of such modification and/or combination exists.[8]

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[7] An applicant may argue that an examiner's conclusion of obviousness is based on improper hindsight reasoning. However, "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." *MPEP* § 2145(X)(A) (emphasis added).

[8] *In Re Sang Su Lee* 277 F.3d 1338 (Fed. Cir. 2002) ("When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.") *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the *Graham* factors). *"The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'") (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340,

B. Technical Material Cited by Examiner (Mulgund and Bennett) Does Not Show or Suggest the Text of Amended Claim 1 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 1

As amended, Claim 1 recites:

> 1. A method comprising:
>
> creating a plurality of first-administered content indexes for a first set of motes;
>
> aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes;
>
> creating one or more second-administered content indexes for a second set of motes;
>
> obtaining at least a part of the second-administered content indexes of the second set of motes; and
>
> creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 1. Accordingly, Applicant respectfully requests that Examiner allow Claim 1 for the reasons set forth below.

1352, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998)); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); *In re Dance*, 160 F.3d 1339, 1343, 48 U.S.P.Q.2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988) ("'teachings of references can be combined only if there is some suggestion or incentive to do so.'") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984)). The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.")).

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 1.

As set forth above, Claim 1 recites:

1. A method comprising:

[a] creating a plurality of first-administered content indexes for a first set of motes;

[b] *aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes*;

[c] creating one or more second-administered content indexes for a second set of motes;

[d] obtaining at least a part of the second-administered content indexes of the second set of motes; and

[e] *creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes*. (emphasis added).[9]

With respect to claim 1, Examiner has stated,

"As to claim 1, Mulgund shows: creating one or more first-administered content indexes for a first set of motes [building a database model by updating relational database logical design tables at each step of the discovering step, the model created comprised of an identity of each of the sensing nodes as well as any metadata about each node] (par. [0007], [0021]); obtaining at least a part of the one or more first-administered content indexes of the first set of motes [visiting a node and retrieving the information stored at the node, the information including an identity of each of the sensing nodes as well as any metadata about each node (par. [0062]) wherein information is retrieved from a knowledge base (18) at a node (par. [0026] lines 11-17) and used to form a relational database (Fig. 3 and Fig. 4)]; creating one or more second-administered content indexes for a second set of motes [building a database model by updating relational database logical design tables at each step of the discovering step, the model created comprised of an identity of each of the sensing nodes as well as any metadata about each node] (par. [0007], [0021]); obtaining at least a part of the second-administered content indexes of the second set of motes[visiting a node and retrieving the information stored at the node, the information including an identity of each of the sensing nodes as well as any metadata about each node (par. [0062]) wherein information is retrieved from a knowledge base (18) at a node (par. [0026] lines 11-17) and used to form a relational database (Fig. 3 and Fig. 4)]. Mulgund also shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or

[9] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

more second-administered content indexes [joint table containing metadata and identity of each sensing node] (abstract, paragraph [0005] and [0025], Fig. 3, Fig. 4). Alternatively, Bennett shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes [creating a design document from a first and second tables, each table containing an index] (summary of the invention, Fig. 5A). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund by creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes in order to aggregate information from first and second indexes [tables containing metadata] into a relational database (abstract, in Bennett)." (Office Action mailed June 4, 2008, p. 27-28, sec. 15).

(1) Examiner Citations With Regard to Clause [b] of Independent Claim 1:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [b] of Applicant's claim 1.

More specifically, the Examiner-cited portions of Mulgund recite:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database. (Mulgund, par. [0026] and [0062]).

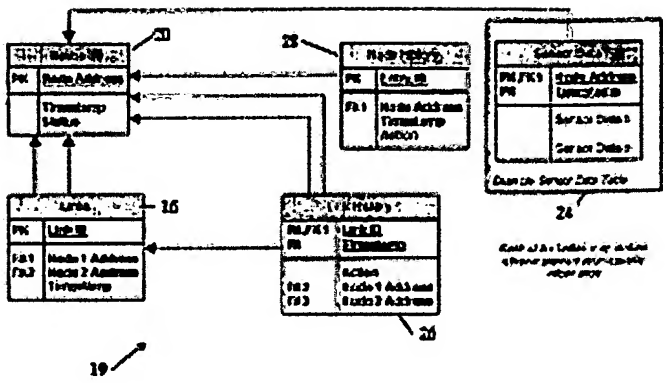

Figure 3

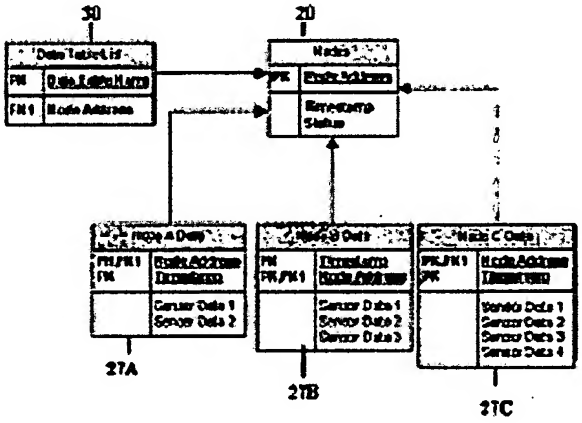

Figure 4

And the Examiner-cited portions of Bennett recite:

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place. (Bennett, Summary of the Invention).

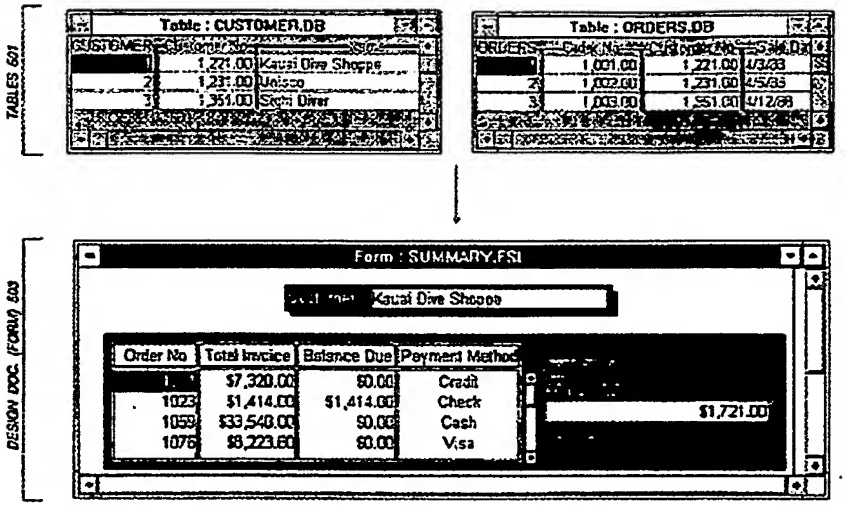

FIG. 5A

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [b] of claim 1. In relevant part, Mulgund teaches "The process of visiting a node involves retrieving the information stored at the node, and updating the local database." (Mulgund, par. [0062]). On the other hand, clause [b] recites "*aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes*" (emphasis added). Because Mulgund fails to teach or suggest clause [b] of claim 1, claim 1 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 1 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [e] of Independent Claim 1:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, neither Mulgund or Bennett shows or suggests the text of clause [e] of Applicant's claim 1. Clause [e] recites "*creating a federated index from the aggregated content*

index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes." (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund and Bennett, neither Mulgund or Bennett shows or suggests the recitations of clause [e] of claim 1. In relevant part, Mulgund teaches "The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database" (Mulgund, par. [0062]), while Bennett teaches "Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place." (Bennett, Summary).

On the other hand, clause [e] recites "*creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes.*" (emphasis added). Because neither Mulgund or Bennett shows or suggests the recitations of clause [e] of claim 1, claim 1 is in condition for allowance for this additional reason.

1. Dependent Claims 2-107: Patentable for at Least Reasons of Dependency from Amended Claim 1.

Claims 2-107 depend either directly or indirectly from claim 1. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, claims 2-107 are patentable for at least the reasons why claim 1 is patentable. Accordingly, Applicant respectfully requests that Examiner hold dependent claims 2-107 patentable for at least the foregoing reasons, and issue a Notice of Allowance on same.

C. Technical Material Cited by Examiner (Mulgund and Bennett) Does Not Show or Suggest the Text of Amended Claim 108 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 108

As amended, Claim 108 recites:

> 108. A system comprising:
> means for creating a plurality of first-administered content indexes for a first set of motes;
> means for aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes;
> means for creating one or more second-administered content indexes for a second set of motes;
> means for obtaining at least a part of the second-administered content indexes of the second set of motes; and
> means for creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes, wherein at least one of the means for creating or the means for obtaining includes at least one of electrical circuitry for creating or electrical circuitry for obtaining.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 108. Accordingly, Applicant respectfully requests that Examiner allow Claim 108 for the reasons set forth below.

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 108.

As set forth above, Claim 108 recites:

> 108. A system comprising:
> [a] means for creating a plurality of first-administered content indexes for a first set of motes;
> [b] *means for aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes*;
> [c] means for creating one or more second-administered content indexes for a second set of motes;
> [d] means for obtaining at least a part of the second-administered content indexes of the second set of motes; and

[e] *means for creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes*, wherein at least one of the means for creating or the means for obtaining includes at least one of electrical circuitry for creating or electrical circuitry for obtaining. (emphasis added).

With respect to claim 108, Examiner has stated,

"As to claim 108, Mulgund and, alternatively, Mulgund in view of Bennett shows all the elements, as discussed above with respect to claim 1." (Office Action mailed June 4, 2008, sec. 15, p. 42).

(1) Examiner Citations With Regard to Clause [b] of Independent Claim 108:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [b] of Applicant's claim 108.

More specifically, the Examiner-cited portions of Mulgund recite:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database. (Mulgund, par. [0026] and [0062]).

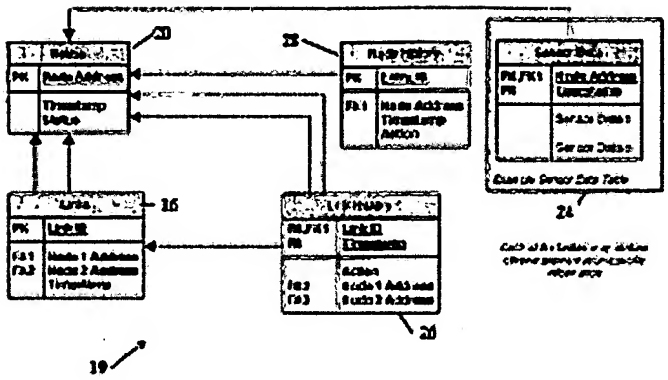

Figure 3

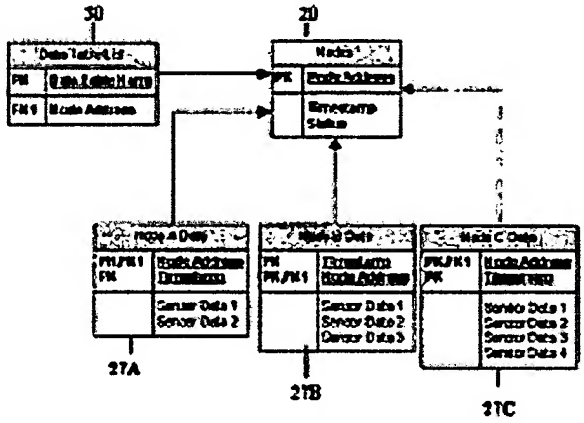

Figure 4

And the Examiner-cited portions of Bennett recite:

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place. (Bennett, Summary of the Invention).

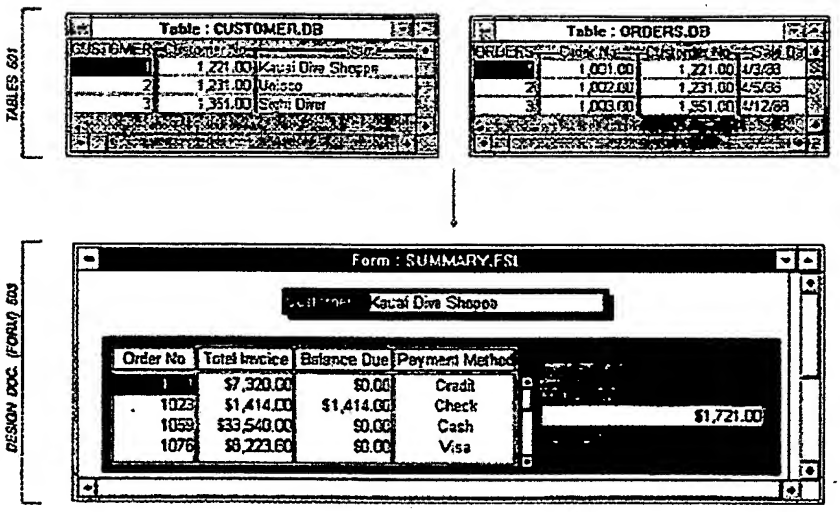

FIG. 5A

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [b] of claim 108. In relevant part, Mulgund teaches "The process of visiting a node involves retrieving the information stored at the node, and updating the local database." (Mulgund, par. [0062]). On the other hand, clause [b] recites "*means for aggregating the plurality of first-administered content indexes of the first set of motes into an aggregated content index using a gateway mote included within the first set of motes*" (emphasis added). Because Mulgund fails to teach or suggest clause [b] of claim 108, claim 108 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 108 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [e] of Independent Claim 108:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund and Bennett identified by Examiner, and so far as Applicant can discern, neither Mulgund or Bennett shows or suggests the text of clause [e] of Applicant's claim 108. Clause [e] recites "*means for creating a federated index from*

the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes." (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund and Bennett, neither Mulgund or Bennett shows or suggests the recitations of clause [e] of claim 108. In relevant part, Mulgund teaches "The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database" (Mulgund, par. [0062]), while Bennett teaches "Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place." (Bennett, Summary).

On the other hand, clause [e] recites "*means for creating a federated index from the aggregated content index aggregated by the gateway mote and at least a part of the one or more second-administered content indexes.*" (emphasis added). Because neither Mulgund or Bennett shows or suggests the recitations of clause [e] of claim 108, claim 108 is in condition for allowance for this additional reason.

2. Dependent Claims 109-128: Patentable for at Least Reasons of Dependency from Amended Claim 108.

Claims 109-128 depend either directly or indirectly from claim 108. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, claims 109-128 are patentable for at least the reasons why claim 108 is patentable. Accordingly, Applicant respectfully requests that Examiner hold dependent claims 109-128 patentable for at least the foregoing reasons, and issue a Notice of Allowance on same.

D. Technical Material Cited by Examiner (Mulgund and Bennett) Does Not Show or Suggest the Text of Amended Claim 129 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 129

As amended, Claim 129 recites:

> 129. A method comprising:
> aggregating a plurality of first-administered content indexes from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes;
> obtaining at least a part of a second-administered content index from a second set of motes; and
> creating a federated index from the aggregated content index from the aggregating mote and at least a part of the second-administered content index.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 129. Accordingly, Applicant respectfully requests that Examiner allow Claim 129 for the reasons set forth below.

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 129.

As set forth above, Claim 129 recites:

> 129. A method comprising:
> [a] *aggregating a plurality of first-administered content indexes from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes*;
> [b] obtaining at least a part of a second-administered content index from a second set of motes; and
> [c] creating a federated index from *the aggregated content index from the aggregating mote* and at least a part of the second-administered content index. (emphasis added).

With respect to claim 129, Examiner has stated,

> "As to claim 129, Mulgund shows; obtaining at least a part of a first-administered content index from a first set of motes [visiting a node and retrieving the information stored at the node, the information including an identity of each of the sensing nodes as well as any metadata about each node (par. [0062]) wherein information is retrieved from a knowledge base (18) at a node (par. [0026] lines 11-17) and used to form a relational database (Fig. 3

and Fig. 4)]; obtaining at least a part of a second-administered content index from a second set of motes [visiting a node and retrieving the information stored at the node, the information including an identity of each of the sensing nodes as well as any metadata about each node (par. [0062]) wherein information is retrieved from a knowledge base (18) at a node (par. [0026] lines 11-17) and used to form a relational database (Fig. 3 and Fig. 4)]. Mulgund also shows creating a federated index from at least a part of the first-administered condent index and at least a part of the second-administered content index [joint table containing metadata and identity of each sensing node] (abstract, para. [0005] and [0025]), Fig. 3, Fig. 4). Alternatively, Bennett shows creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index [creating a design document from a first and second tables, each table containing an index] (summary of the invention, Fig. 5A). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund by creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index in order to aggregate information from first and second indexes [tables containing metadata] into a relational database (abstract, in Bennett)." (Office Action mailed June 4, 2008, sec. 16, p. 45).

(1) Examiner Citations With Regard to Clause [a] of Independent Claim 129:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [a] of Applicant's claim 129.

More specifically, the Examiner-cited portions of Mulgund recite:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database. (Mulgund, par. [0026] and [0062]).

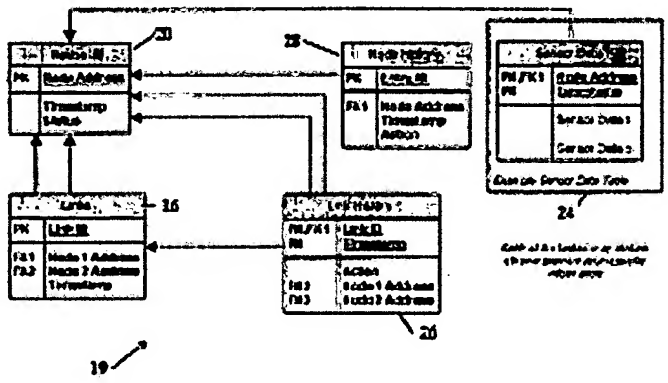

Figure 3

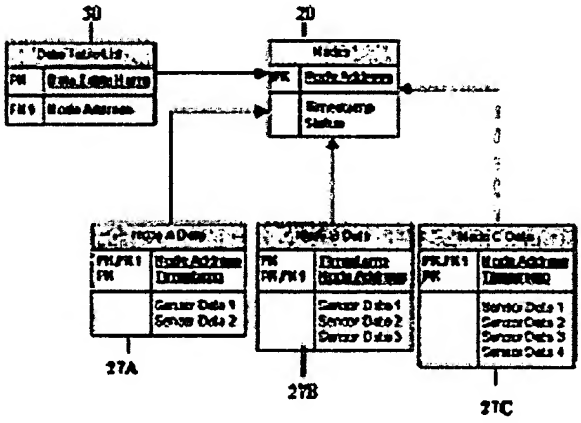

Figure 4

And the Examiner-cited portions of Bennett recite:

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place. (Bennett, Summary of the Invention).

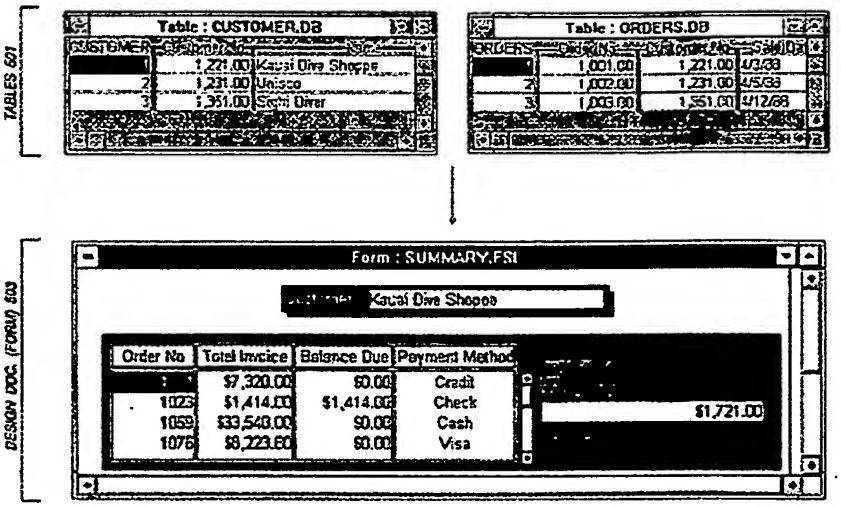

FIG. 5A

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [a] of claim 129. In relevant part, Mulgund teaches "The process of visiting a node involves retrieving the information stored at the node, and updating the local database." (Mulgund, par. [0062]). On the other hand, clause [a] recites "*aggregating a plurality of first-administered content indexes from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes*" (emphasis added). Because Mulgund fails to teach or suggest clause [a] of claim 129, claim 129 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 129 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [c] of Independent Claim 129:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund and Bennett identified by Examiner, and so far as Applicant can discern, neither Mulgund or Bennett shows or suggests the text of clause [c] of Applicant's claim 129. Clause [c] recites "creating a federated index from *the*

aggregated content index from the aggregating mote and at least a part of the second-administered content index." (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund and Bennett, neither Mulgund or Bennett shows or suggests the recitations of clause [c] of claim 129. In relevant part, Mulgund teaches "The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database" (Mulgund, par. [0062]), while Bennett teaches "Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place." (Bennett, Summary).

On the other hand, clause [c] recites "creating a federated index from *the aggregated content index from the aggregating mote* and at least a part of the second-administered content index." (emphasis added). Because neither Mulgund or Bennett shows or suggests the recitations of clause [c] of claim 129, claim 129 is in condition for allowance for this additional reason.

2. Dependent Claims 130-153: Patentable for at Least Reasons of Dependency from Amended Claim 129.

Claims 130-153 depend either directly or indirectly from claim 129. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, claims 130-153 are patentable for at least the reasons why claim 129 is patentable. Accordingly, Applicant respectfully requests that Examiner hold dependent claims 130-153 patentable for at least the foregoing reasons, and issue a Notice of Allowance on same.

E. Technical Material Cited by Examiner (Mulgund and Bennett) Does Not Show or Suggest the Text of Amended Claim 154 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 154

As amended, Claim 154 recites:

> 154. A system comprising:
> means for aggregating a plurality of a first-administered content index from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes;
> means for receiving at least a part of a second-administered content index from a second set of motes; and
> means for creating a federated index from the aggregated content index from the aggregating mote and at least a part of the second-administered content index, wherein at least one of the means for obtaining or the means for creating includes at least one of electrical circuitry for obtaining or electrical circuitry for creating.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 154. Accordingly, Applicant respectfully requests that Examiner allow Claim 154 for the reasons set forth below.

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 154.

As set forth above, Claim 154 recites:

> 154. A system comprising:
> [a] *means for aggregating a plurality of a first-administered content index from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes*;
> [b] means for receiving at least a part of a second-administered content index from a second set of motes; and
> [c] means for creating a federated index from *the aggregated content index from the aggregating mote* and at least a part of the second-administered content index, wherein at least one of the means for obtaining or the means for creating includes at least one of electrical circuitry for obtaining or electrical circuitry for creating. (emphasis added).

With respect to claim 154, Examiner has stated,

"As to claim 154, Mulgund in view of Bennett shows all the elements, as discussed above with respect to claim 129." (Office Action mailed June 4, 2008, sec. 16, p. 47).

(1) Examiner Citations With Regard to Clause [a] of Independent Claim 154:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [a] of Applicant's claim 154.

More specifically, the Examiner-cited portions of Mulgund recite:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database. (Mulgund, par. [0026] and [0062]).

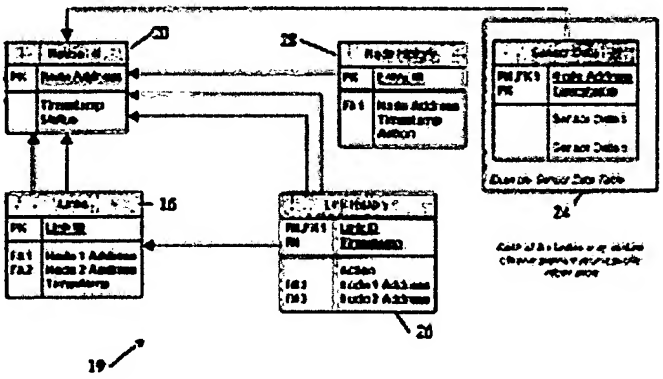

Figure 3

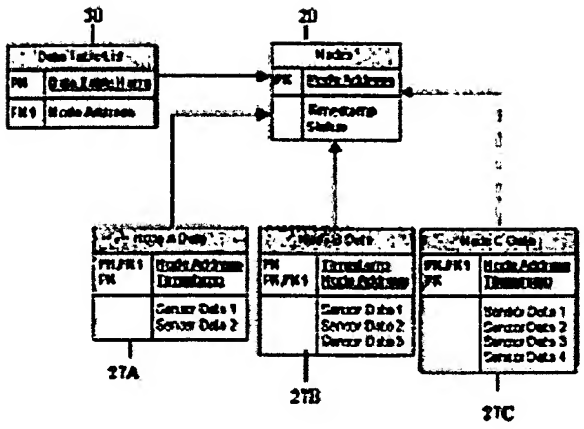

Figure 4

And the Examiner-cited portions of Bennett recite:

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place. (Bennett, Summary of the Invention).

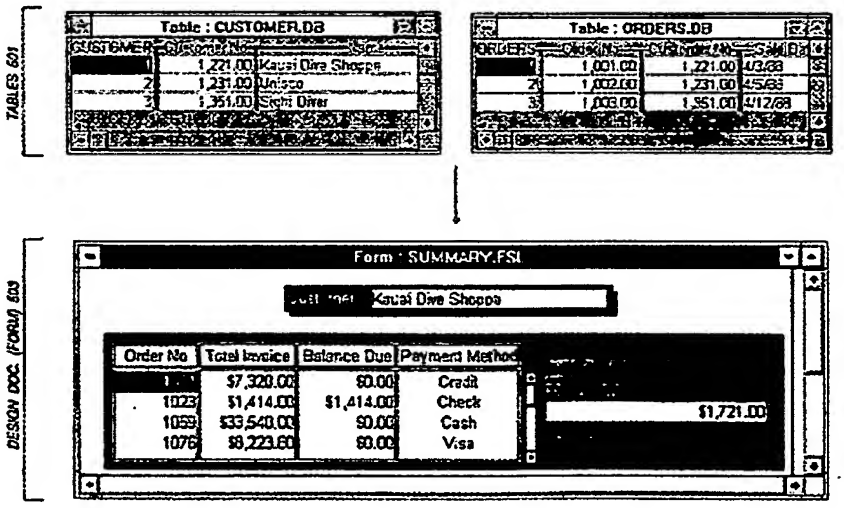

FIG. 5A

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [a] of claim 154. In relevant part, Mulgund teaches "The process of visiting a node involves retrieving the information stored at the node, and updating the local database." (Mulgund, par. [0062]). On the other hand, clause [a] recites "*means for aggregating a plurality of first-administered content indexes from a first set of motes into an aggregated content index using an aggregating mote from among the first set of motes*" (emphasis added). Because Mulgund fails to teach or suggest clause [a] of claim 154, claim 154 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 154 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [c] of Independent Claim 154:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund and Bennett identified by Examiner, and so far as Applicant can discern, neither Mulgund or Bennett shows or suggests the text of clause [c] of Applicant's claim 154. Clause [c] recites "means for creating a federated index from *the aggregated content index from the aggregating mote* and at least a part of the second-administered content index." (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund and Bennett, neither Mulgund or Bennett shows or suggests the recitations of clause [c] of claim 154. In relevant part, Mulgund teaches "The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database" (Mulgund, par. [0062]), while Bennett teaches "Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place." (Bennett, Summary).

On the other hand, clause [c] recites "means for creating a federated index from *the aggregated content index from the aggregating mote* and at least a part of the second-administered content index." (emphasis added). Because neither Mulgund or

Bennett shows or suggests the recitations of clause [c] of claim 154, claim 154 is in condition for allowance for this additional reason.

2. Dependent Claims 155-178: Patentable for at Least Reasons of Dependency from Amended Claim 154.

Claims 155-178 depend either directly or indirectly from claim 154. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, claims 155-178 are patentable for at least the reasons why claim 154 is patentable. Accordingly, Applicant respectfully requests that Examiner hold dependent claims 155-178 patentable for at least the foregoing reasons, and issue a Notice of Allowance on same.

F. Technical Material Cited by Examiner (Mulgund) Does Not Show or Suggest the Text of Amended Claim 179 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 179

As amended, Claim 179 recites:

> 179. A system comprising:
>
> at least one computational system having electrical circuitry and being operably coupled with a first-administered set of motes and a second-administered set of motes;
>
> at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to
>
> receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and
>
> aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and
>
> at least one federated index creation agent resident in the computational system, said at least one federated index creation agent

configured to receive the at least one aggregated index, and to create a federated index that includes the at least one aggregated index.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 179. Accordingly, Applicant respectfully requests that Examiner allow Claim 179.

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 179.

As set forth above, Claim 179 recites:

179. A system comprising:

[a] at least one computational system having electrical circuitry and being operably coupled with a first-administered set of motes and a second-administered set of motes;

[b] *at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to*

receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and

aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and

[c] at least one federated index creation agent resident in the computational system, said *at least one federated index creation agent configured to receive the at least one aggregated index, and to create a federated index that includes the at least one aggregated index.* (emphasis added).

With respect to claim 179, Examiner has stated,

"As to claim 179, Mulgund shows: at least one computational system [database server (10)] operably coupled with at least one of a first-administered set of motes (Fig. 1); at least one federated index creation agent resident in the computational system [network modeling agent (14)] (Fig. 1), said at least one federated index [instantaneous state of the sensing network] (par. [0020] l. 17-20)." Office Action mailed June 4, 2008, p. 25-26, sec. 14).

(1) Examiner Citations With Regard to Clause [b] of Independent Claim 179:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [b] of Applicant's claim 179.

More specifically, the Examiner-cited portions of Mulgund recites:

> [0020] FIG. 1 illustrates the environment in which the present invention may be employed. Distributed sensing nodes 2 are connected to one another in a sensing network 4 through some kind of ad hoc networking protocol, with an attendant physical implementation (which may be wired or wireless). The topology of the network 4 is largely unconstrained, except that there exist a finite number of known access points 6 that comprise a bridge between the sensing network 4 and a conventional information technology (IT) infrastructure such as a corporate LAN 8. The access points 6 provide the means by which the information at each node 2 can be obtained from outside the network 4. The access points 6 may even be implicit; the sensing network 4 could just as easily be a peer-to-peer arrangement on a conventional TCP/IP network. On the LAN 8 is a database server 10 includes a network model database 12 and operates a network modeling agent (NMA) 14. The NMA 14 is useful in creating a model of the instantaneous state of the sensing network 4. (Mulgund, par. [0020]).

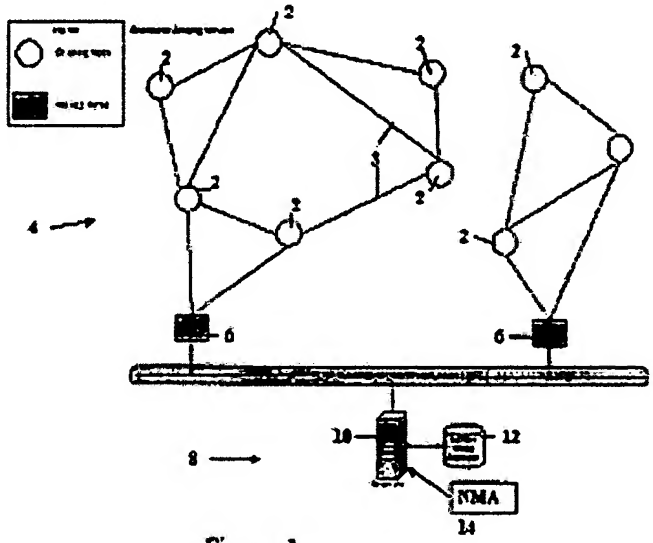

Figure 1

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [b] of claim 179. In relevant part, Mulgund teaches "a database server 10 includes a network model database 12 and operates a network modeling agent (NMA) 14. The NMA 14 is

useful in creating a model of the instantaneous state of the sensing network 4." (Mulgund, par. [0020]). On the other hand, clause [b] recites "*at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively;*" (emphasis added). Because Mulgund fails to teach or suggest clause [b] of claim 179, claim 179 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 179 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [c] of Independent Claim 179:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [c] of Applicant's claim 179. Clause [c] recites "at least one federated index creation agent resident in the computational system, said *at least one federated index creation agent configured to receive the at least one aggregated index, and to create a federated index that includes the at least one aggregated index.*" (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund, Mulgund does not show or suggest the recitations of clause [c] of claim 179. In relevant part, Mulgund teaches "a database server 10 includes a network model database 12 and operates a network modeling agent (NMA) 14. The NMA 14 is useful in creating a model of the instantaneous state of the sensing network 4." (Mulgund, par. [0020]). On the other hand, clause [c] recites "at least one federated index creation agent resident in the computational system, said *at least one federated index creation agent configured to receive the at least one aggregated index, and to create a federated index that includes the at least one aggregated index*"

(emphasis added). Because Mulgund fails to teach or suggest clause [c] of claim 179, claim 179 is allowable over Mulgund for this additional reason.

G. Technical Material Cited by Examiner (Mulgund) Does Not Show or Suggest the Text of Amended Claim 180 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Amended Claim 180

As amended, Claim 180 recites:

> 180. A system comprising:
> at least one computational system having electrical circuitry and being operably coupled with a first-administered set of motes and a second-administered set of motes;
> at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to
> receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and
> aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and
> at least one federated index resident in the computational system, said at least one at least one federated index configured to contain the at least one aggregated index.

As shown in the following, the technical material cited by the Examiner does not show or suggest the text of Claim 180. Accordingly, Applicant respectfully requests that Examiner allow Claim 180.

a) Technical Material Cited by Examiner Does Not Show or Suggest the Text of Amended Claim 180.

As set forth above, Claim 180 recites:

> 180. A system comprising:

[a] at least one computational system having electrical circuitry and being operably coupled with a first-administered set of motes and a second-administered set of motes;

[b] *at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index creation agent configured to*

receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and

aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively; and

[c] at least one federated index resident in the computational system, *said at least one at least one federated index configured to contain the at least one aggregated index.* (emphasis added).

With respect to claim 180, Examiner has stated,

"As to claim 180, Mulgund shows: at least one computational system [database server (10)] operably coupled with at least one of a first-administered set of motes (Fig. 1); at least one federated index resident in the computational system [metadata about each node] (Figs. 3 and 4), said at least one federated index configured to contain at least a part of at least one of a mote-addressed content index (par. [0021] – [0024])." Office Action mailed June 4, 2008, p. 26, sec. 14).

(1) Examiner Citations With Regard to Clause [b] of Independent Claim 180:

Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [b] of Applicant's claim 180.

More specifically, the Examiner-cited portions of Mulgund recites:

[0021] an identity (unique identifying information such as a numeric address) of each of the sensing nodes 2 in the network 4, as well as any metadata about each node;

[0022] a connectivity of each of the sensing nodes 2; i.e., a structural representation of the network topology that could be used to reconstruct a diagram such as FIG. 1;

[0023] an up-to-date information content at each of the sensing nodes 2; i.e., a real-time snapshot and time-history of the data of interest generated at each node location by an attached suite of sensors 16, as depicted in FIG. 2; and

[0024] a history of the network 4 from the moment the model was first constructed, which would allow a reconstruction of the network's state at any time in the past.
(Mulgund, par. [0021]-[0024]).

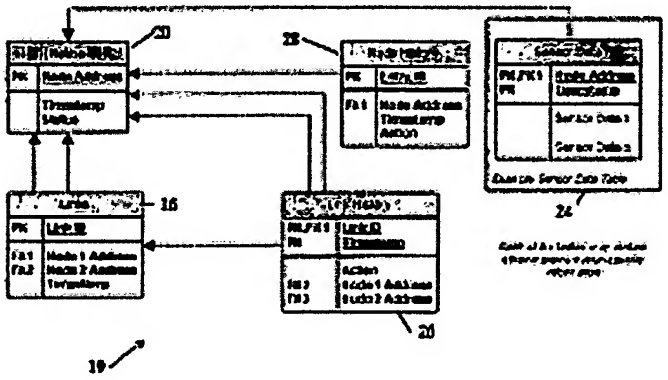

Figure 3

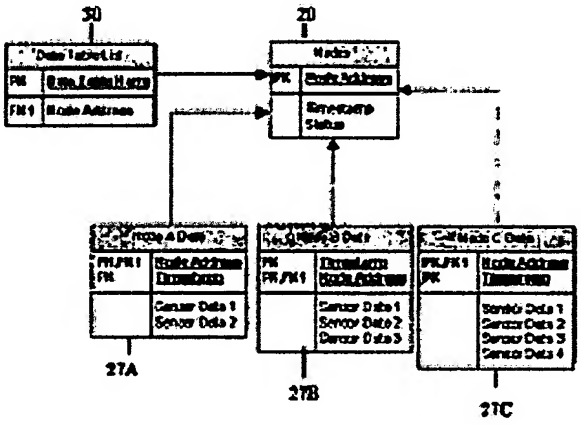

Figure 4

Applicant respectfully submits that, as can be seen from the foregoing, Mulgund does not show or suggest the recitations of clause [b] of claim 180. In relevant part, Mulgund teaches "a database server 10 includes a network model database 12 and operates a network modeling agent (NMA) 14. The NMA 14 is useful in creating a model of the instantaneous state of the sensing network 4." (Mulgund, par. [0020]). On the other hand, clause [b] recites "*at least one gateway mote included within at least one of the first-administered set of motes or the second-administered set of motes, the at least one gateway mote including a multi-mote index*

creation agent configured to receive a plurality of content indexes from a corresponding plurality of motes of the at least one of the first-administered set of motes or the second-administered set of motes, and aggregate the plurality of content indexes into at least one aggregated index associated with the at least one of the first-administered set of motes or the second-administered set of motes, respectively" (emphasis added). Because Mulgund fails to teach or suggest clause [b] of claim 180, claim 180 is allowable over Mulgund.

In view of the foregoing, and under the MPEP standards as set forth above, Applicant respectfully submits that claim 180 is in condition for allowance.

(2) Examiner Citations With Regard to Clause [c] of Independent Claim 180:

Similarly, Applicant respectfully points out that Applicant has reviewed the portions of Mulgund identified by Examiner, and so far as Applicant can discern, Mulgund does not recite or suggest the text of clause [c] of Applicant's claim 180. Clause [c] recites "at least one federated index resident in the computational system, *said at least one at least one federated index configured to contain the at least one aggregated index.*" (emphasis added).

Applicant respectfully submits that, as can be seen from the foregoing cited portions of Mulgund, Mulgund does not show or suggest the recitations of clause [c] of claim 180. In relevant part, Mulgund teaches "an up-to-date information content at each of the sensing nodes 2; i.e., a real-time snapshot and time-history of the data of interest generated at each node location by an attached suite of sensors 16, as depicted in FIG. 2; and a history of the network 4 from the moment the model was first constructed, which would allow a reconstruction of the network's state at any time in the past." (Mulgund, par. [0023]-[0024])). On the other hand, clause [c] recites "at least one federated index resident in the computational system, *said at least one at least one federated index configured to contain the at least one aggregated index*" (emphasis added). Because Mulgund fails to teach or suggest clause [c] of claim 180, claim 180 is allowable over Mulgund for this additional reason.

VIII. CONCLUSION

Applicant has during the course of prosecution amended one or more claims, and may in the future further amend or cancel claims. Applicant notes that any such cancellations and/or amendments will have transpired (i) prior to issuance and (ii) in the context of the rules that govern claim interpretation during prosecution before the United States Patent and Trademark Office (USPTO). Applicant notes that the rules that govern claim interpretation during prosecution form a radically different context than the rules that govern claim interpretation subsequent to a patent issuing. Accordingly, Applicant respectfully submits that any cancellations and/or amendments during the course of prosecution should be held to be tangential to and/or unrelated to patentability in the event that such cancellations and/or amendments are viewed in a post-issuance context under post-issuance claim interpretation rules.

Insofar as that the Applicant has during the course of prosecution amended claims sufficient to obtain a Notice of Allowability of all claims pending, Applicant may not have during the course of prosecution explicitly addressed all rejections and/or statements in Examiner's Office Actions. The fact that rejections and/or statements may not be explicitly addressed during the course of prosecution should NOT be taken as an admission of any sort, and Applicant hereby reserves any and all rights to contest such rejections and/or statements at a later time. Specifically, no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended (e.g., with respect to any facts of which Examiner took Official Notice, and/or for which Examiner has supplied no objective showing, Applicant hereby contests those facts and requests express documentary proof of such facts at such time at which such facts may become relevant). For example, although not expressly set forth during the course of prosecution, Applicant continues to assert all points of (e.g. caused by, resulting from, responsive to, etc.) any previous Office Action, and no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended. Specifically, insofar as that Applicant does not consider the cancelled/unamended claims to be unpatentable,

Applicant hereby gives notice that it may intend to file and/or has filed a continuing application in order prosecute such cancelled/unamended claims.

With respect to any cancelled claims, such cancelled claims were and continue to be a part of the original and/or present patent application(s). Applicant hereby reserves all rights to present any cancelled claim or claims for examination at a later time in this or another application. Applicant hereby gives public notice that any cancelled claims are still to be considered as present in all related patent application(s) (e.g. the original and/or present patent application) for all appropriate purposes (e.g., written description and/or enablement). Applicant does NOT intend to dedicate the subject matter of any cancelled claims to the public.

The Examiner is invited to contact Dale Barr (360)627-7147 or Dale R. Cook at (425) 467-2260 with any issues that may advance prosecution of the application on the merits.

Respectfully submitted,

Dec. 4, 2008
Date

Dale C. Barr
Registration No. 40,498

Enclosures: Check #2610 for three-month extension of time ($1110.00)